REMARKS

Applicant hereby amends Claims 11, 12, 16, 19, 22 and 25 for clarity. Remaining independent Claims 13 and 26 are not amended. All of the pending claims are believed in condition for allowance.

The primary rejection of the claims is based upon Shuman and Tognazzini. However, it is believed that it is not obvious to combine these references, and even if combined, these references do not disclose, teach or suggest Applicant's claimed invention.

It is noted that Applicant's invention generally relates to a system for use with conventional vehicles which uses roadside detectors to detect danger states in the roadway. The vehicle includes a receiver that receives a transmitter signal generated by a transmitter, which transmitter emits the transmitter signal when the detector detects a danger state. The transmitter signal thereby indicates the presence of a danger state. Once this signal is received, the vehicle automatically brakes the vehicle until the actual traveling speed reaches a target traveling speed wherein the data as to the target traveling speed is set on the vehicle. This is believed to distinctly differ from the prior art systems disclosed in the applied prior art.

More particularly as to the prior art, Shuman discloses a broad diagrammatic description of numerous possible features of a vehicle system. The Office Action identifies a transmitter 262 and uses claim language to describe Shuman. However, the system of Shuman is believed to distinctly differ.

Shuman primarily discloses a system which uses numerous onboard sensors to detect the immediate surroundings about a vehicle and detect the vehicle's internal mechanisms. This data is detected onboard, analyzed and then a data model is

generated. The data primarily used for this data model is detected onboard.

As to the communications manager 260 and its communications 262, this communication is performed with a roadside service provider. The information received is only believed to be general information that then is inputted into the data model in combination with all of the other data to provide an overall view of the vehicle area.

While Shuman may generate a warning, i.e. an audible or visual warning, This still requires manual operation of the vehicle and manual reaction to the warning.

Shuman does not disclose receiving a transmitter signal and then automatically braking the vehicle. Rather, Shuman is believed to disclose collecting a large quantity of data and then performing processes depending upon the model created by this data. While one process includes obstacle avoidance, this is only believe to occur upon actually sensing the location of the obstacle by onboard sensors and then controlling the car based upon the detection of the obstacle with the onboard sensors.

Shuman does not disclose a roadside detector which detects a roadway danger state and then automatically braking to a set speed in response to the presence of a transmitter signal that indicates the presence of the danger state.

The Office Action cites Col. 13, lines 28-32 of Shuman as disclosing a reference value setting means. This statement is not understand and is not believed to be supported by Shuman. The cited section only refers generally to a braking assistance application, which uses some kind of unknown information from the "data model 213" which data model is a comprehensive mapping of the entire vehicle environment. This braking application then provides some unknown output to vaguely "assist the function of the vehicle brakes." This disclosure does not disclose any type of reference value

setting means by which a target traveling speed is set. This target traveling speed according to the invention is a target speed to which the vehicle is slowed, which distinctly differs from a comprehensive data model reflecting the entire vehicle environment.

As to the disclosure of Column 22, lines 38-43, this information relates to a speed calculation process which forms part of the cruise control application. This indicates that all of the comprehensive data detected by the onboard computers is reviewed and calculated, and then continuously changed depending upon the new information continuously detected by the onboard sensors. This involves real-time monitoring and continuous receipt of information from the sensors, and this differs from applicant's claimed invention. Further, this is part of the cruise control system which may be turned on or off, and as such, would not be used to detect a danger state.

Generally, this cited section of Shuman differs from setting a target speed onboard a vehicle and then automatically reducing the actual speed to the target speed once a transmitter signal is received from a roadside detector. The claimed system does not require continuous detection of a transmitter signal but brakes automatically once the transmitter signal is received.

The Office Action further acknowledges that Shuman does not disclose a roadside detection means which outputs a detection signal indicating a danger state, but asserts that it would be obvious to modify Shuman with Tognazzini.

It is noted that Tognazzini discloses a system for detecting foggy conditions and then communicating modified speed limits to vehicles. These speed limits primarily are sign type warning devices but the information could be sent by AM or FM signals as disclosed in Col. 5, lines 15-16 (the reference to Col. 2 seems to be an inadvertent error).

However, the radio signal sends "warning information" which is a warning to the driver to change the speed. Notably, much of Tognazzini specifically deals with information provided to drivers to get the drivers to manually change their speed either faster or slower so as to follow the modified speed limits.

Tognazzini includes some brief statements as to overriding a desired speed but there are no specifics provided to enable one to even understand or construct what is proposed and certainly Tognazzini does not disclose the specifics of Applicant's claimed invention. In particular, Tognazzini does not disclose setting a target speed on a vehicle and then automatically reducing the speed to such speed to avoid a danger state, particularly since the AM and FM signals are only warnings to the driver to implore the driver to manually change their speed.

Based on Tognazzini and Shuman, it is not believed obvious to construct Applicant's claimed invention. Shuman creates a comprehensive data model using numerous onboard sensors to create an environmental model for the vehicle. This model requires specific detailed information on the immediate environment and also identifies nearby cars, such that the system of Tognazzini would not even be used therewith. It is noted that the speed referenced in Shuman is determined by the onboard data model and this model does not rely upon a speed limit determined by a roadside system. A roadside system is unnecessary in view of the numerous onboard sensors of Shuman which already detect vehicles, such that the system of Tognazzini is not necessary and the use of a general speed limit of Tognazzini avoids the precise control asserted by Shuman. Hence, Applicant respectfully submits that these references would not be combined.

Further, even if combined, the combined references still do not teach Applicant's claimed invention. In particular,

neither Shuman nor Tognazzini disclose having a target speed set onboard the vehicle and then conducting an automatic braking of the vehicle to reach this target speed once a transmitter signal is received. The individual independent claims are discussed in more specific detail hereinafter.

Claim 11 defines a detection means provided adjacent to a road and a receiver provided on the vehicle which receives the transmitter signal from the transmitter. The automatic braking device thereof operates an antilock control device independent of additional transmitter signals received from the transmitter. This further emphasizes that once the transmitter signal is received, continuous monitoring of this transmitter signal is not required nor does it occur since automatic braking is affected based upon initial receipt of the transmitter signal. Claim 11 further defines that a reference value corresponding to a target traveling speed is set inside the vehicle. Such a target traveling speed is not defined in Tognazzini or Shuman. With this value being set inside the vehicle, the automatic braking device is actuated independent of the manual actuator based on receipt of the control signal wherein the automatic braking device operates with reference to this reference value to automatically reduce the actual speed to the target speed. Such an automatic braking does not occur in Shuman or Tognazzini and particularly with respect to a target speed set inside the vehicle.

Claim 12 also defines that a reference value corresponding to a target traveling speed is set inside the vehicle such that the automatic braking device is actuated independent of the manual actuator based on receipt of the control signal wherein when the actual speed exceeds the target speed the automatic braking device operates with reference to the reference value to automatically reduce the actual speed to the target speed. This automatic reduction in

speed, independent of a manual actuator, in response to a transmitter signal is not believed to occur in Shuman or Tognazzini. Neither Shuman nor Tognazzini disclose setting a target speed within an automatic braking device and then automatically reducing the actual vehicle speed to this target speed upon receipt of a transmitter signal indicating detection of a danger state by a roadside detector.

Claim 13 is unamended and is believed allowable. This claim defines the vehicle as automatically reducing the actual speed thereof during emergency conditions. Detection means are provided adjacent to a road and a transmitter signal is provided by a transmitter to a receiver on the vehicle. An automatic braking device receives a control signal from the receiver upon receipt of the transmitter signal. Here again, a target speed setting device is provided on the vehicle in which is set a target traveling speed such that the braking device reduces the actual speed to the target speed automatically based on receipt of the control signal and independently of the manual actuator. Here again, Shuman and Tognazzini do not disclose a system which receives a transmitter signal indicating the detection of a danger state on the roadway and then automatically reducing a vehicle speed to a target speed independent of the manual actuator.

Claim 16 defines a reference value for the target speed being set inside the vehicle such that the automatic brake is actuated independent of the manual actuator based on receipt of a control signal which control signal is generated based upon receipt of a transmitter signal indicating a danger state.

The automatic braking device operates with reference to the reference value independent of continued receipt of additional transmitter signals from the transmitter. As such, continuous transmitter signals are not required but merely the transmitter signal indicating the presence of a danger state.

Thus, the system merely need react to the presence of a danger state and then automatically reduce the speed to a target speed. Shuman distinctly differs since it continuously detects through onboard sensors the immediate environment around a vehicle and creates a data model which continuously varies relative to the data model. This system does not disclose or provide a target speed in the vehicle and then automatically reducing to this speed upon the detection of a danger state signal. Tognazzini as discussed above does not cure the deficiencies of Shuman, particularly since the AM/FM signals referenced in the Office Action only transmit warnings to the operator requesting operator cooperation therewith.

Claim 19 again defines the reference value in the vehicle wherein the automatic braking device is actuated based on receipt of a control signal. As discussed above, relative to the other claims, it is believed that the claimed arrangement of Claim 19 is distinguishable from Shuman and Tognazzini.

As to Claim 22, this claim defines the reference value being set inside the vehicle and the automatic brake is operated to reduce the actual speed to the target speed without requiring receipt of additional transmitter signals by the receiver after operation of the automatic brake has been initiated by receipt of the transmitter signal. This arrangement is not disclosed, taught or suggested by the applied prior art.

Claim 25 defines a similar arrangement of components to those discussed above and further defines that the automatic braking device is operated as a result of receipt of the control signal. Further, the target speed defined by the stored reference value is a speed which allows the vehicle to avoid the detected danger state wherein the automatic braking device compares an actual speed with the reference value after the transmitter signal is received such that automatic braking occurs with reference to the comparison of the actual

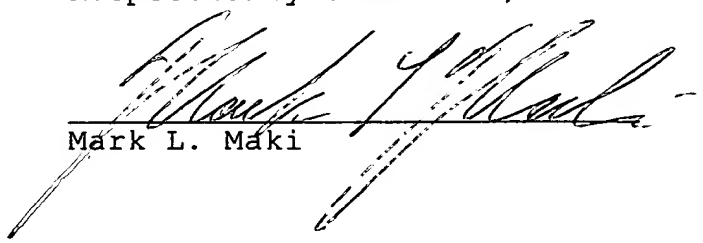
traveling speed with the reference value. Further, Claim 25 defines that the actual speed is automatically reduced without requiring braking by the operator or receipt of additional transmitter signals. Here again, this claim combination is not disclosed, taught or suggested by the applied prior art.

Claim 26 is unamended and also is believed allowable. It is noted that Claim 26 defines the automatic braking device which initiates and continues actuation of one of the wheel brakes as a result of receipt of control signal generated in turn by a danger state being detected by a road side detector. The automatic braking device includes a target speed setting device in which is stored a target traveling speed. The automatic braking device continues to actuate the wheel brakes based on receipt of the control signal to automatically produce the braking force until the actual speed is reduced to the target speed.

The actuation of the wheel brakes does not require actuation of the manual actuator or receipt of additional transmitter signals to produce the braking force. As discussed above, it is believed that Shuman is distinctly different in that it requires continuous data received from the sensors and continuously monitors all of the data to vary the operation of the Shuman vehicle.

Based upon the foregoing, all of the pending claims are believed allowable and further and favorable consideration of this application is respectfully solicited.

Respectfully submitted,



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